

37. The apparatus according to claim **34**, wherein the apparatus comprises a user device in a millimeter wave system (mmWave).

38. The apparatus according to claim **37**, wherein the at least one memory and the computer program code are further configured, with the at least one processor, to cause the apparatus at least to receive a communication of a multi-beam pattern if it is not known at the user device a priori.

39. The apparatus according to claim **34**, wherein the at least one memory and the computer program code are further configured, with the at least one processor, to cause the apparatus at least to reduce the automatic gain control (AGC) setting to determine whether a beam with a stronger signal is detected.

40. The apparatus according to claim **34**, further comprising determining the initial timing synchronization point from the multi-beam acquisition sequence.

41. The apparatus according to claim **34**, further comprising determining a strongest beam from the multi-beam acquisition sequence and reporting it back to the access point.

42. A computer program, embodied on a non-transitory computer readable medium, wherein the computer program is configured to control a processor to perform a process, comprising:

setting, by a user device, automatic gain control (AGC) in a receiver of the user device to a large gain;

detecting at least one acquisition burst in a multi-beam acquisition sequence comprising a first burst type repeated on different antenna beams with a defined pattern of antenna beams; and

detecting at least one corresponding automatic frequency correction (AFC) burst in a multi-beam AFC sequence one AFC interval later comprising a second burst type repeated on the different antenna beams with said defined pattern of antenna beams,

wherein the multi-beam acquisition sequence and the automatic multi-beam AFC sequence are different.

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